

MEDB 1.2 Crew Medical Officer Health Status Evaluations

3.2 Medical Requirements Overview

TABLE 3.2: MEDICAL REQUIREMENTS OVERVIEW

| | |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEDB# and Title: | MEDB 1.2 Crew Medical Officer Health Status Evaluations |
| Sponsor: | Medical Operations |
| Discipline: | N/A |
| Category: | Medical Requirements |
| References: | SSP 50260 ISS Medical Operations Requirements Document (MORD) SSP 50667 Medical Evaluations Document (MED) Volume B |
| Purpose/Objectives: | To assess the medical status of the crewmember in-flight and report the findings to the Crew Surgeon. |
| Measurement Parameters: | Periodic Health Status (PHS) Evaluation labs: A. Vitals B. Physical Exam C. Labs- 1. Blood Chemistry (per surgeon discretion) 2. Urinalysis (per surgeon discretion) |
| Deliverables: | Data Collection Tool Form (and pictures if applicable) |
| Flight Duration: | ≥ 30 days |
| Number of Flights: | All long-duration flights |
| Number and Type of Crew Members Required: | All Crewmembers |
| Other Flight Characteristics: | N/A |

MEDB 1.2 Crew Medical Officer Health Status Evaluations

3.3 Preflight Training

TABLE 3.3: PREFLIGHT TRAINING

| | | | | | |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------|----------------------------|
| Preflight Training Activity | Description: | Two Crew Medical Officers (CMOs) will be trained to perform medical evaluations and diagnosis at L-4 months. | | | |
| | Schedule: | Duration: | Schedule: | Flexibility: | Personnel Required: |
| | | CMO Skills 1 3 hours | L-18-24 months (Trip 2A6) | +/- 1 crew trip | Instructor/ CMOs |
| Ground Support Requirements Hardware/Software | Preflight Hardware: | Preflight Software: | | Test Location: | |
| | Station Support Computer (SSC) Medical Diagnostic Pack (Blood Pressure Device, Thermometer, Otoscope) | Data Collection Tool (DCT) software | | U.S | |
| Training Facilities | Minimum Room Dimensions: | Number of Electrical Outlets: | Temperature Requirements: | Special Lighting: | |
| | Standard room, 8' x 10' | 4 (U.S. 110V, Russia 220V) | Normal, 20° – 25°C. | Normal lighting with dimming capability | |
| | Hot or Cold Running Water: | Privacy Requirements: | Other: | | |
| | Running water needed for hand washing. | Private room required | N/A | | |
| Constraints/Special Requirements: | | N/A | | | |
| Launch Delay Requirements: | | Refresher training to be scheduled @ Crew Surgeon or crew request | | | |
| Notes: | | Training Procedures: SODF: ISS Med (Medical Checklist) | | | |

3.4 Preflight Activities – No Preflight Activities

MEDB 1.2 Crew Medical Officer Health Status Evaluations

3.5 In-Flight Activities

TABLE 3.5.1: IN-FLIGHT ACTIVITIES

| | | | | | | |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------|---------------------|
| In-Flight Activity | Description: | These tests will be conducted periodically in flight L+14/21 L+90, prior to landing R-21/14 (prelanding medical evaluation), and at the Flight Surgeon's discretion. | | | | |
| | Schedule: | Duration: | Schedule: | Flexibility: | Blood Volume: | Personnel Required: |
| | | Set up – 15 min Exam – 15 min (Subj.); 15 min (CMO) Data Entry – 10 min Stow – 10 min | L+14/21 days L+90 days R-21/14 days Additional testing may be needed for missions exceeding 180 d. | +/- 3 days | 65µL (If requested by Crew Surgeon) | CMO & Crew |
| Procedures: | 2.0.106 Exam – Periodic Health Evaluation (ISS Medical Checklist) | | | | | |
| Constraints / Special Requirements: | -Schedule equipment setup prior to PHS. -Exercise or any strenuous activity that results in sore muscles should not be performed 24 hours prior to PHS. - Blood labs and/or Urinalysis per Surgeon discretion. | | | | | |
| Photo / TV Requirements: | Imagery is required (digital otoscope) | | | | | |
| Cold Stowage Requirements: | | | | | | |
| Mission Extension Requirements: | N/A | | | | | |
| Data Delivery | 1. In-flight PHS discrete values are recorded in the DCT and will be saved along with PHS Otoscope images on the Station Support Computer (SSC) File Server. PHS data will be downlinked within the week of test completion from the SSC server. PHS data is archived within the Mission Extended Medical Enterprise (MEME) environment. 2. Data may be downlinked to the ground more frequently, at the Flight Surgeon's request. | | | | | |

TABLE 3.5.2: IN-FLIGHT HARDWARE

| Hardware/Software Name |
|-----------------------------------|
| Station Support Computer (SSC) |
| SSC Data Collection Tool Software |
| Medical Supply Pack |
| Medical Diagnostic Pack |

3.6 Postflight Activities – No Postflight Activities

MEDB 1.2 Crew Medical Officer Health Status Evaluations

3.7 Summary Schedule

TABLE 3.7: SUMMARY SCHEDULE

| ACTIVITY | DURATION | SCHEDULE | FLEXIBILITY | BLOOD VOLUME | PERSONNEL REQUIRED | CONSTRAINTS |
|---------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------|-------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preflight Training | | | | | | |
| CMO Skills 1 | 3 hours | L-18-24 months (Trip 2A6) | +/- 1 crew trip | N/A | Instructor/CMOs | N/A |
| Preflight: N/A | | | | | | |
| In-Flight | | | | | | |
| PHS | Set up – 15 min Exam – 15 min (Subj.); 15 min (CMO) Data Entry – 10 min Stow – 10 min | L+14/21 days L+90 days R-21/14 days | +/- 3 days | 65µL (If requested by Crew Surgeon) | CMO & Crew | -Schedule equipment setup prior to PHS. -Blood labs and/or Urinalysis per Surgeon discretion. -Strenuous activity that results in sore muscles should not be performed 24 hours prior to PHS. |
| Postflight – N/A | | | | | | |
| Postflight Debrief | | | | | | |
| PHS | Included as part of the overall MedOps debrief | | | | | |